

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Previously Presented) Method of structuring surfaces of micro-mechanical and/or micro-optical components and/or functional elements of glass-type materials, comprising:

structuring at least one surface of a first substrate in order to obtain recesses on the at least one surface;

joining said first substrate to a second substrate of glass, with the structured surface of said first substrate being joined to a surface of said second substrate of glass in an at least partly overlapping relationship;

annealing the joined first and second substrates in such a way that said glass flows into the recesses of said structured surface of said first substrate, structuring a side of said second substrate which faces said first substrate, the joined second substrate includes a free upper side which is turned away from said first substrate during the flow of the glass into the recesses of said structured surface of said first substrate; and

separating said second substrate from said first substrate.

2-4. (Canceled)

5. (Previously Presented) Method according to Claim 1, wherein said second substrate is separated from said first substrate by removal of said first substrate by etching.

6. (Previously Presented) Method according to Claim 1, wherein the separation of said second substrate from said first substrate is produced by providing a parting layer between said first and second substrates that is applied on said structured surface while maintaining the structure prior to joining both substrates and that is configured as sacrificial layer that will be destroyed by thermal and/or chemical action and permits a separation of both substrates from each other.

7. (Previously Presented) Method according to Claim 6, wherein a metal layer is employed as the parting layer, the metal layer having a melting point below the melting points of said first and second substrates.

8. (Previously Presented) Method according to Claim 6, wherein an oxidizable layer is used as the parting layer, the oxidizable layer undergoing a chemical reaction when oxygen and/or thermal energy is supplied.

9. (Previously Presented) Method according to Claim 6, wherein a carbon layer or a diamond layer is used as the parting layer.

10. (Previously Presented) Method according to Claim 1, wherein the structured surface of said first substrate presents the recesses having structure

widths B while said second substrate presents a thickness D, and that the following approximate relationship applies:

$$B \geq 0.1 \cdot D.$$

11. (Previously Presented) Method according to Claim 1, wherein said first substrate is a semiconductor substrate and/or said glass is a borosilicate glass.

12. (Previously Presented) Method according to Claim 11, wherein said semiconductor substrate is a silicon substrate and/or said borosilicate glass comprises by weight about 81% SiO₂, about 13% B₂O₃, about 4% Na₂O and about 2% Al₂O₃.

13. (Previously Presented) Method according to Claim 1, wherein the joining of said first substrate to said second substrate of glass is carried out by anodic bonding.

14. (Currently Amended) Method of structuring surfaces of micro-mechanical and/or micro-optical components and/or functional elements of glass-type materials, comprising:

structuring at least one surface of a first substrate in order to obtain recesses on the at least one surface;

joining said first substrate to a second substrate of glass, with the structured surface of said first substrate being joined to a surface of said second substrate of glass in an at least partly overlapping relationship;

annealing the joined first and second substrates in such a way that said glass flows into the recesses of said structured surface of said first substrate, structuring a side of said second substrate which faces said first substrate; and

separating said second substrate from said first substrate[.];

wherein a negative pressure prevailing throughout the joining process is preserved, after joining, in the recesses of the surface of said first substrate, between said first substrate and said second substrate of glass.

15. (Previously Presented) Method according to Claim 1, wherein an overpressure acts upon the surface of said second substrate of glass which is turned away from said first substrate throughout the annealing.

16. (Previously Presented) Method according to Claim 1, wherein the annealing process is carried out by controlling temperature and period in such a way that the inflow of said glass into the recesses of said first substrate is stopped at a desired depth of inflow, without the glass contacting a bottom of said recesses.

17. (Previously Presented) Method according to Claim 16, wherein at least one of pressure during the annealing, the temperature of the annealing and the period of the annealing are selected that a relief moulding of the structured surface of said first substrate will be produced on the surface of said second substrate of glass.

18. (Previously Presented) Method according to Claim 1, wherein one surface of said glass substrate is planished by grinding and/or polishing after annealing or after removal of said first substrate by etching.

19. (Previously Presented) Method according to Claim 1, wherein a third substrate is evenly applied on a side of said second substrate which is turned away from said first substrate prior to the annealing.

20. (Previously Presented) Method according to Claim 19, wherein said third substrate is a semiconductor substrate.

21. (Previously Presented) Method according to Claim 19, wherein said third substrate is removed by an etching operation after the annealing process and that a planar surface is created on a side of said second substrate which is turned away from said first substrate.

22-39. (Canceled)

40. (Previously Presented) Method of structuring surfaces of micro-mechanical and/or micro-optical components and/or functional elements of glass-type materials, comprising:

structuring at least one surface of a first substrate in order to obtain recesses on the at least one surface;

joining said first substrate to a second substrate of glass, with the structured surface of said first substrate being joined to a flat surface of said second substrate of glass in an at least partly overlapping relationship;

annealing the joined first and second substrates in such a way that said glass flows into the recesses of said structured surface of said first substrate, structuring a side of said second substrate which faces said first substrate; and

separating said second substrate from said first substrate.

41. (Previously Presented) Method according to Claim 1, wherein a process chamber pressure acts upon the surface of said second substrate which is turned away from said first substrate throughout the annealing and the flow of the glass into the recesses of said structured surface of said first substrate.